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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/055,883 | 01/28/2002 | Yong-Kyu Jang | 6192.0222.AA | 2057 |

7590 03/15/2004
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EXAMINER

CHUNG, DAVID Y

| ART UNIT | PAPER NUMBER |
|----------|--------------|
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2871

DATE MAILED: 03/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/055,883 | Applicant(s) JANG, YONG-KYU | |
| | Examiner David Y. Chung | Art Unit 2871 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-14 is/are allowed.
- 6) ☒ Claim(s) 1,2,15,16,24,30 and 33 is/are rejected.
- 7) ☒ Claim(s) 3-14,17-23,25-29,31,32,34 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 2, 15, 16, 24, 30 and 33 rejected under 35 U.S.C. 102(e) as being anticipated by Kim (U.S. 6,406,949).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As to claims 1 and 15, Kim discloses a conventional TFT-LCD in figure 1. A peripheral region comprising gate pad 21 (left side of figure 1) and a pixel region (right side of figure 1) comprising pixel electrode 13 are shown. The gate electrode 2 is part of the TFT connected to the pixel for applying an electrical signal to the pixel. Because

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the gate pad is integrally formed with the gate electrode, the gate pad is also connected to the pixel via the gate electrode. See column 1, lines 35-37. An insulation layer comprising gate insulator 4 and passivation layer 10 is formed in the pixel region and peripheral region. Note the opening region formed in the passivation layer 10 of the peripheral region. This opening has a periphery greater than that of the gate pad such that the gate pad is formed completely within this opening.

As to claims 2 and 16, the gate insulator 4 formed within the above mentioned opening region is thinner than the combined insulation layer (gate insulator and passivation layer) formed outside of the opening region.

As to claim 24, the passivation layer 10 can be interpreted as the first insulation layer and the gate insulator can be interpreted as the second insulation layer. Figure 2G shows the passivation layer formed in the pixel and peripheral regions being selectively removed in the opening region with a contact hole being formed in the pixel region. Figure 2F shows an opening in the gate insulator exposing the gate pad in the opening region.

As to claims 30 and 33, the passivation layer 10 can be interpreted as the second insulation layer and the gate insulator can be interpreted as the first insulation layer. A portion of the gate insulator is removed in the opening region as shown in figure 2F. A portion of the passivation layer is removed to expose the pad as shown in

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figure 2G. A pad electrode would inherently be formed on the pad in order to send a signal to the gate lines.

Claims 15 and 33 rejected under 35 U.S.C. 102(e) as being anticipated by Kim et al. (U.S. 6,650,394).

As to claim 15, Kim et al. discloses a identification mark pad formed in a peripheral portion of the display. Note in figure 12F, the pixel region (right side) comprising pixel electrode 60P, and peripheral region (left side) comprising identification mark pad 51. An insulation layer comprising passivation layer 59 and gate insulator 58 is formed over both regions. The opening formed in the insulation layer in the peripheral region has a periphery greater than that of identification mark pad 51. See column 5, lines 45-65.

As to claim 33, a portion of the gate insulator 58 is removed from the opening region and a portion of the passivation layer 59 is removed to expose the identification mark pad 51. Kim et al. discloses forming the transparent layer 60 in figure 5 of the same material as the pixel electrode. See column 3, lines 50-60. Therefore, the transparent layer 60 can be considered a pad electrode.

Response to Arguments

Applicant's arguments with respect to claims 1-29 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 10-14 allowed.

Claims 3-14, 17-23, 25-29, 31, 32, 34 and 35 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

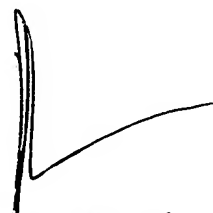
The following is a statement of reasons for the indication of allowable subject matter: The prior art applied in this office action did not teach forming a reflective display, and the identification mark pads disclosed by Kim et al. (U.S. 6,650,394) do not seem to be connected to the pixel electrodes.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Chung whose telephone number is (571) 272-2288. The examiner can normally be reached on Monday-Friday from 8:30 am to 5:00 pm.


KENNETH PARKER
PRIMARY EXAMINER